**12**. The method of claim **1**, further comprising:

predetermining the target trajectory for the vehicle, and

determining or monitoring whether the predetermined target trajectory is maintained depending on the collision-free trajectories.

**13**. A device for determining and/or monitoring a target trajectory of a vehicle by which a starting point corresponding to the current position of the vehicle is connected to a target point,

wherein the device comprises a detector and a processor,

wherein the detector is configured to detect a target trajectory for each road user, wherein each of the further target trajectories connects the starting point of the respective road user to a target point corresponding to the respective road user,

wherein the processor are equipped to determine different trajectories of the vehicle that connect the starting point to the target point to determine those trajectories of the vehicle as collision-free trajectories that do not result in a collision with one of the road users, and to determine and/or to monitor the target trajectory depending on the collision-free trajectories of the vehicle.

**14**. The device of claim **13**, wherein the device determines an occupancy map that indicates whether one of the road users is in a certain grid cell of a grid map of a lane in which the vehicle is traveling at a certain point in time, and determines the collision-free trajectories depending on the occupancy map.

**15**. The device of claim **13**, wherein the device determines a state space for the vehicle by determining the minimum and the maximum based on the trajectories of the vehicle per grid cell of a grid map of a lane on which the vehicle is traveling for at least one property of points of the trajectories that lie within the respective grid cell, wherein the determination and/or monitoring of the target trajectory is/are carried out depending on the state space.

**16**. The device of claim **13**, wherein the device determines the minimum and the maximum for at least one property of points on the collision-free trajectories that lie within the respective grid cell based on the collision-free trajectories of the vehicle for the grid cells of a grid map of a lane in which the vehicle is traveling, wherein the target trajectory of the vehicle is determined and/or monitored depending on the minimum and the maximum of the at least one property.

**17**. The device of claim **13**, wherein the device predetermines the target trajectory for the vehicle, and determines or

monitors whether the predetermined target trajectory is maintained depending on the collision-free trajectories.

**18**. A vehicle with a device for determining and/or monitoring a target trajectory of a vehicle by which a starting point corresponding to the current position of the vehicle is connected to a target point,

wherein the device comprises a detector and a processor,

wherein the detector is configured to detect a target trajectory for each road user, wherein each of the further target trajectories connects the starting point of the respective road user to a target point corresponding to the respective road user,

wherein the processor are equipped to determine different trajectories of the vehicle that connect the starting point to the target point to determine those trajectories of the vehicle as collision-free trajectories that do not result in a collision with one of the road users, and to determine and/or to monitor the target trajectory depending on the collision-free trajectories of the vehicle.

**19**. The vehicle of claim **18**, wherein the device determines an occupancy map that indicates whether one of the road users is in a certain grid cell of a grid map of a lane in which the vehicle is traveling at a certain point in time, and determines the collision-free trajectories depending on the occupancy map.

**20**. The vehicle of claim **18**, wherein the device determines a state space for the vehicle by determining the minimum and the maximum based on the trajectories of the vehicle per grid cell of a grid map of a lane on which the vehicle is traveling for at least one property of points of the trajectories that lie within the respective grid cell, wherein the determination and/or monitoring of the target trajectory is/are carried out depending on the state space.

**21**. The vehicle of claim **18**, wherein the device determines the minimum and the maximum for at least one property of points on the collision-free trajectories that lie within the respective grid cell based on the collision-free trajectories of the vehicle for the grid cells of a grid map of a lane in which the vehicle is traveling, wherein the target trajectory of the vehicle is determined and/or monitored depending on the minimum and the maximum of the at least one property.

**22**. The vehicle of claim **18**, wherein the device predetermines the target trajectory for the vehicle, and determines or monitors whether the predetermined target trajectory is maintained depending on the collision-free trajectories.

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